



MENTAL HEALTH CONSIDERATIONS FOR CLIMATE MIGRANTS

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NCTTP 16TH ANNUAL RESEARCH SYMPOSIUM (03/18/2024)

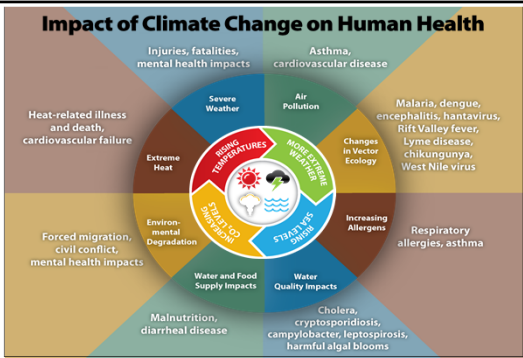
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- I have disclosed no relevant financial interest/arrangement or affiliation with any commercial companies who have provided products or services relating to this presentation or commercial support for this presentation.



LEARNING OBJECTIVES

- Detail how climate change impacts physical, mental, and community health of resettled refugees
- Describe immigration patterns shaped by climate change
- Identify specific strategies for management of climate-related mental health issues in patients and provider self-care





CLIMATE CHANGE IMPACT

Disproportionality

- Groups most impacted by mental health implications of climate change
 - Indigenous communities
 - People of color
 - Immigrants
 - Houseless
 - Women
 - Children
 - Seniors
 - Outdoor laborers



By undermining the social and environmental determinants that underpin good health, climate change exacerbates the social, economic, and demographic inequalities, with the impacts eventually felt by all populations.

Watts N et al., The Lancet Countdown on health and climate change: from 25 years of inaction to a global transformation for public health. Lancet. 2018 Feb 10;391(10120)





CLIMATE CHANGE IMPACT

Classification of the Crisis

- Acute Events
 - Wildfires
 - Hurricanes
 - Tornados
 - Floods
 - Heat waves
- Sub-Acute Events
 - Drought
 - Prolonged extreme heat



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CLIMATE CHANGE IMPACT

Acute Events

- Direct Impact
 - PTSD
 - Anxiety
 - Depression
 - SUD
- Complicated grief
- Survivors guilt
- Vicarious trauma
- Recovery fatigue

Hayes K, et al. Climate change and mental health: risks, impacts and priority actions. Int J Ment Health Syst, 12:28; 2018

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CLIMATE CHANGE IMPACT

Acute Events

- Direct Impact
 - 20-35% of Hurricane Katrina survivors diagnosed with mental health issues
 - PTSD tended to peak 1 year after
 - 14.9% at 5-8 months →
 - 20.9% at 12 months



Anderson H, et al., Climate and health intervention assessment: evidence on public health interventions to prevent the negative health effects of climate change. Climate and health technical report series. BRACE Midwest and Southeast Community of Practice. Climate and Health Program, Centers for Disease Control and Prevention. 2017.
Whaley AL. Trauma among survivors of Hurricane Katrina: considerations and recommendations for mental health care. J Loss Trauma. 2009;14(6):459-76.

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CLIMATE CHANGE IMPACT

Acute Events

- Direct Impact
 - Doubling of homicide-suicides after Hurricane Andrew
 - 18 months after Hurricane Katrina
 - Suicidal thoughts (2.8%→6.4%)
 - Suicidal plans (1.0%→2.5%)



Kessler, RC, et al., Trends in mental illness and suicidality after Hurricane Katrina. Molecular Psychiatry, 13, 374-384; 2008
 Dodgen D, et al., Ch. 8: mental health and well-being. Washington, DC: US Global Change Research Program; 2016

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CLIMATE CHANGE IMPACT

Acute Events

- Indirect
 - Physical injury or impairment effects
 - Damages to physical and social infrastructure
 - Loss of employment or income
 - Food and water shortages
 - Homelessness and/or forced relocation

Hayes et al. Climate change and mental health: risks, impacts and priority actions, Int J Ment Health Syst (2018) 12:28

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CLIMATE CHANGE IMPACT

Sub-Acute Events

- Direct Impact
 - Physical health problems reciprocally associated with mental health problems
 - Particularly closely related in vulnerable groups
 - Seasonally-associated mental health conditions worsen
 - Anxiety, depression, SAD, bulimia nervosa may be exacerbated in regions with fewer hours of sunlight

Magnusson A. An overview of epidemiological studies on seasonal affective disorder. Acta Psychiatr Scand 101:176–184; 2000

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CLIMATE CHANGE IMPACT

Sub-Acute Events

▪ Indirect Impact

- Extreme heat associated with psychiatric admissions
 - mood, anxiety, dementia, somatoform
- Extreme heat associated with mortality risk in those with pre-existing mental health problems
 - 3x risk for any-cause mortality
- Prolonged increased heat associated with aggressive behavior and criminality
- Higher depression in agricultural areas during drought

Berry HL, Bowen K, Kjellstrom T. Climate change and mental health: a causal pathways framework. *Int J Public Health*. Apr;55(2):123-32; 2010
 Carroll N, Fritjers P, Shields MA. Quantifying the costs of drought: new evidence from life satisfaction data. *J Popul Econ* 22:445-461; 2009
 Bouchama A, et al., Prognostic factors in heatwave-related deaths: a meta-analysis. *Arch Intern Med* 167:E1-E7; 2007
 Hanson A, et al., The effect of heat waves on mental health in a temperate Australian city. *Environ Health Perspect* 116:1369-1375; 2008

CLIMATE CHANGE IMPACT

Sub-Acute Events

▪ Indirect Impact

- Heat exposure → reduce physical and mental capacity
 → risk of accidents is increased → loss of work → worsen mental health
- Extreme heat → reduced work capacity → economic hardship → subsequent poorer mental health
- Increased workloads and lack of time/money → reduced socialization → reduced relationships → worsen mental health

CLIMATE CHANGE IMPACT

Acute and Sub-Acute Events

▪ Indirect Impact

- "Climate migration"
 - Permanent dislocation from land
 - agricultural degradation
 - shoreline erosion
 - coastal flooding



Gemenne F, et al., Climate and security: evidence, emerging risks, and a new agenda. *Clim Change*. 123(1):1-9; 2014

CLIMATE CHANGE IMPACT

Acute and Sub-Acute Events

▪ Indirect Impact

- Loss of home, place, social networks
 - depression, trauma
- Refugees estimate by 2050
 - 150 million by IPCC
 - 25 million – 1 billion by Institute of Environment and Human Security of UNU



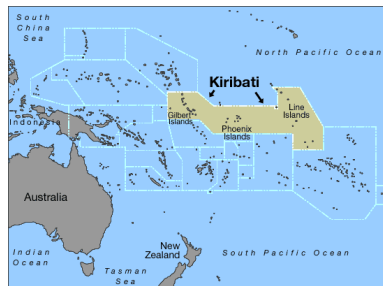
Berry HL, Bowen K, Kjelstrom T; Climate change and mental health: a causal pathways framework. Int J Public Health, 55:123–132; 2010



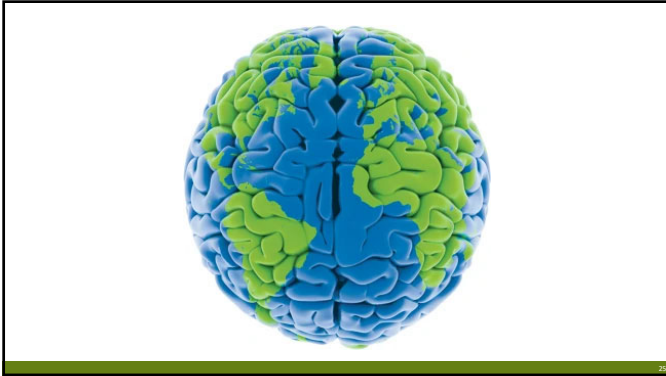


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NEW ZEALAND

"The UN Human Rights Committee has determined that countries cannot deport people who have sought asylum due to climate-related threats"







PSYCHOTERRATIC SYNDORMES

- Mental conditions related to our relationship with nature
- Emotional distress related to awareness of constant problems humans face due to climate change



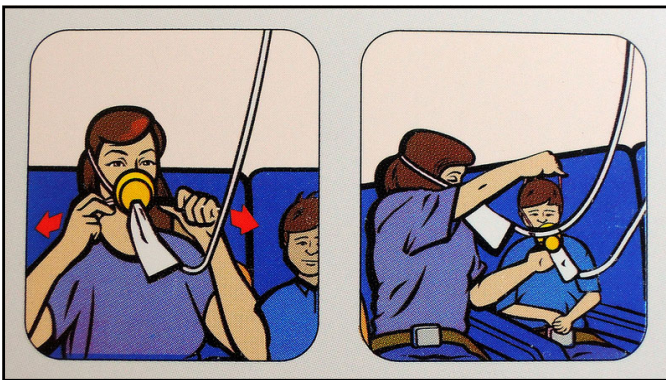
Albrecht G, et al., Solastalgia: the distress caused by environmental change. Aust Psychiatry. 15(Suppl 1):S95-8. 2007

PSYCHOTERRATIC SYNDORMES

- *Ecoanxiety*
 - Constantly surrounded by threatening climate change
- *Ecoparalysis*
 - Feeling unable to take effective action to help
- *Solastalgia*
 - "The distress and isolation by gradual removal of solace from one's present home environment"


Albrecht G, et al., Solastalgia: the distress caused by environmental change. Aust Psychiatry. 15(Suppl 1):S95-8. 2007





CLIMATE MENTAL HEALTH INTERVENTIONS

- “Mental Health and Our Changing Climate: Impacts, Inequities, Responses”
 - 88-page report
 - American Psychological Association
 - Climate for Health
 - ecoAmerica
 - Excellent “crash course”



Clayton, S, Manning, CM, Speiser, M, & Hill, AN. (2021). Mental Health and Our Changing Climate: Impacts, Inequities, Responses. Washington, D.C.: American Psychological Association, and ecoAmerica.

CLIMATE MENTAL HEALTH INTERVENTIONS

- Build **belief** in one's own resilience
 - People who feel positive about their ability to overcome stress/trauma is correlated with fewer symptoms of PTSD/MDD post-disaster
- Foster **optimism**
 - Positive reappraisal of own circumstances help someone move forward vs. getting stuck in negative emotion cycle
- Cultivate **active coping**
 - Maintaining awareness of thoughts and proactive behaviors

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CLIMATE MENTAL HEALTH INTERVENTIONS

- Cultivate **self-regulation**
 - Ability to control one's immediate impulses for long term strategy
- Find a source of personal **meaning**
 - Sense of faith, spiritual practice, or mindfulness can boost well-being
- Boost personal **preparedness**
 - Have short-term emergency and disaster kits
 - Include items specific to mental health

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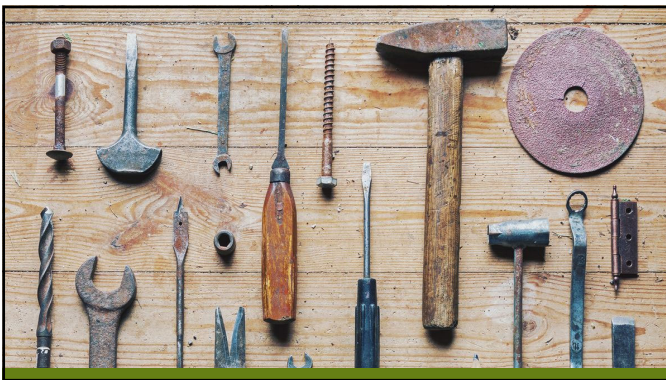
CLIMATE MENTAL HEALTH INTERVENTIONS

- Support **social networks**
 - Capacity to withstand trauma is increased when connected
- Encourage connection with **parents, family, and other role models**
 - Parent-child relationship particularly important, but so is non-caregiver role models (teachers, coaches)
- Uphold **connection to place**
 - People who feel more connected to place are more likely to take adaptive actions

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CLIMATE MENTAL HEALTH INTERVENTIONS

- Maintain connections to **one's culture**
 - Family cohesion, participation in traditions and cultural connectiveness were protective vs. mental health issues during difficult times
 - Particularly relevant for refugees and the displaced





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